Table 9.1 – Price of Fuels Delivered to Electric Generators

(2001 Dollars per Million Btu) [1]

	1990[2]	2000	2001	2010	2020	2025
Distillate Fuel	NA	NA	NA	5.13	6.06	6.18
Residual Fuel [3]	4.27	4.39	4.50	3.97	4.21	4.40
Natural Gas	2.93	4.42	4.78	3.79	4.30	4.60
Steam Coal [4]	1.84	1.23	1.25	1.17	1.12	1.10
Fossil Fuel Average [5]	3.72	2.01	2.14	1.82	2.02	2.14

Sources: EIA, *Annual Energy Outlook 2003*, DOE/EIA-0383(2003) (Washington, D.C., January 2003), Table A3; EIA, *Electric Power Annual 2001*, DOE/EIA-0348(01) (Washington, D.C., March 2003), Table 4.5.

Note:
Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

[1] Historical Data converted to 2001$/MMBtu using EIA EPA 2001 Appendix E. Forecast data converted to 2001$/MMBtu using EIA AEO 2003 Table A20.

[2] Data for 1990 are for steam-electric plants with a generator nameplate capacity of 50 or more megawatts.

[3] Data for 1990-2001are for distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum), and waste oil.

[4] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

[5] Weighted average price.

Table 9.2 – Electricity Retail Sales

(Billion Kilowatthours)

	1980	1990	2000	2001	2010	2020	2025
Price by End-Use Sector[1]							
Residential	717	924	1,192	1,201	1,445	1,640	1,742
Commercial	488	751	1,055	1,085	1,471	1,816	2,003
Industrial	815	946	1,064	994	1,157	1,358	1,466
Transportation / Other[2]	74	92	109	117	27	36	42
Total	2,094	2,713	3,421	3,397	4,101	4,850	5,252

Sources: EIA, *Annual Energy Outlook 2003*, DOE/EIA-0383 (2003), (Washington, D.C., January 2003), Table A8; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.5.

Notes:

[1] Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

[2] Other includes public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales through 2001. Transportation sector sales reported starting in 2010.

Table 9.3 - Prices of Electricity Sold

(2001 cents per Kilowatthour) [1]

	1980	1990	2000	2001	2010	2020	2025
Price by End-Use Sector [2]							
Residential	10.4	9.9	8.4	8.6	7.6	7.8	7.9
Commercial	10.5	9.3	7.6	7.9	6.7	7.2	7.3
Industrial	7.1	6.0	4.7	5.1	4.3	4.5	4.6
Transportation / Other[3]	9.2	8.1	6.7	6.5	6.5	6.3	6.1
End-Use Sector Average [4]	9.0	8.3	7.0	7.3	6.4	6.6	6.7
Price by Service Category [2]							
Generation	NA	NA	NA	NA	3.8	4.1	4.2
Transmission	NA	NA	NA	NA	0.6	0.6	0.6
Distribution	NA	NA	NA	NA	2.0	1.9	1.9

Sources: EIA, *Annual Energy Outlook 2003*, DOE/EIA-0383 (2003), (Washington, D.C., January 2003), Table A8; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.6.

Notes:

[1] Historical Data converted to 2001$/MMBtu using EIA EPA 2001 Appendix E. Forecast data converted to 2001$/MMBtu using EIA AEO 2003 Table A20.

[2] Prices represent average revenue per kilowatthour.

[3] Other includes public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales through 2001. Transportation sector revenue reported starting in 2010.

[4] For 1980, data are for selected Class A utilities whose electric operating revenues were $100 million or more during the previous year. For 1990, data are for a census of electric utilities. For 2000-2001, data also include energy service providers selling to retail customers.

Table 9.4 - Revenue from Electric Utility Retail Sales by Sector

(Millions of 2001 Dollars)

	1980	1990	2000	2001	2010	2020	2025
Residential	74,568	91,467	100,359	102,926	109,820	127,920	137,618
Commercial	51,240	69,690	80,093	85,824	98,557	130,752	146,219
Industrial	57,865	56,689	50,444	50,396	49,751	61,110	67,436
Transportation / Other[1]	6,808	7,444	7,306	7,547	1,755	2,268	2,562
All Sectors [2]	188,460	225,345	238,041	246,622	262,464	320,100	351,884

Sources: Calculated from EIA, *Annual Energy Outlook 2003*, DOE/EIA-0383(2003), (Washington, D.C., January 2003), Table A8; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Tables 8.5 and 8.6.

Notes:

[1] Other includes public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales through 2001. Transportation sector revenue reported starting in 2010.

[2] For 1980, data are for selected Class A utilities whose electric operating revenues were $100 million or more during the previous year. For 1990, data are for a census of electric utilities. For 2000-2001, data also include energy service providers selling to retail customers.

Table 9.5 - Revenue from Sales to Ultimate Consumers by Sector, Census Division, and State, 2000

(Million Dollars)

Census Division State	Residential	Commercial	Industrial	Other[1]	All Sectors[2]
New England	**4,613**	**4,499**	**2,083**	**216**	**11,410**
Connecticut	1,264	1,106	425	57	2,852
Maine	467	380	314	19	1,178
Massachusetts	1,850	2,102	864	99	4,914
New Hampshire	481	408	238	16	1,143
Rhode Island	301	301	122	20	743
Vermont	251	203	120	6	579
Middle Atlantic	**12,823**	**13,828**	**4,961**	**1,416**	**33,027**
New Jersey	2,522	3,027	1,013	61	6,624
New York	6,010	7,562	1,389	1,206	16,167
Pennsylvania	4,291	3,238	2,559	149	10,237
East North Central	**13,635**	**11,460**	**10,065**	**1,002**	**36,161**
Illinois	3,546	3,207	2,043	549	9,345
Indiana	1,967	1,214	1,829	58	5,068
Michigan	2,618	2,832	1,898	100	7,449
Ohio	4,002	3,102	3,237	240	10,581
Wisconsin	1,502	1,104	1,057	54	3,717
West North Central	**6,467**	**4,274**	**3,635**	**406**	**14,781**
Iowa	1,007	551	665	95	2,319
Kansas	959	782	465	48	2,254
Minnesota	1,400	736	1,319	56	3,511
Missouri	2,084	1,508	712	67	4,370
Nebraska	545	382	263	103	1,292
North Dakota	218	155	121	18	512
South Dakota	254	161	90	19	523
South Atlantic	**22,481**	**14,894**	**6,994**	**1,379**	**45,748**
Delaware	305	239	134	7	685
District of Columbia	130	629	13	26	798
Florida	7,696	4,511	913	405	13,526
Georgia	3,386	2,401	1,481	135	7,404
Maryland	1,905	1,691	417	76	4,089
North Carolina	3,709	2,345	1,569	144	7,767
East South Central	**6,814**	**4,321**	**4,469**	**357**	**15,962**
Alabama	2,028	1,254	1,357	48	4,687
Kentucky	1,279	717	1,136	146	3,277
Mississippi	1,191	734	657	70	2,652
Tennessee	2,316	1,617	1,320	93	5,346
West South Central	**13,920**	**8,468**	**7,386**	**1,409**	**31,183**
Arkansas	1,109	519	726	46	2,399
Louisiana	2,127	1,308	1,599	195	5,229
Oklahoma	1,380	805	570	157	2,912
Texas	9,305	5,835	4,491	1,011	20,642
Mountain	**5,396**	**4,552**	**2,905**	**399**	**13,252**
Arizona	2,096	1,572	631	131	4,431
Colorado	1,025	998	423	81	2,528
Idaho	377	300	262	15	953
Montana	254	213	261	2	729
Nevada	685	441	560	29	1,715
New Mexico	413	471	257	96	1,237
Utah	410	412	265	36	1,123
Wyoming	137	145	246	10	537
Pacific Contiguous	**11,395**	**11,443**	**6,345**	**562**	**29,745**
California	8,629	9,502	4,594	380	23,105
Oregon	1,071	774	582	34	2,460
Washington	1,695	1,166	1,170	149	4,180
Pacific Noncontiguous	**666**	**668**	**527**	**34**	**1,895**
Alaska	212	219	78	26	535
Hawaii	454	450	448	8	1,360
U.S. Total	**98,209**	**78,405**	**49,369**	**7,179**	**233,163**

South Carolina	1,916	1,110	1,246	60	4,332
Virginia	2,823	1,598	804	518	5,742
West Virginia	610	371	417	8	1,405

Source: EIA, *Electric Sales and Revenue 2000,* Data Tables, http://www.eia.doe.gov/cneaf/electricity/esr/esr_tabsh.html, Table 1c.

Notes:

[1] Includes sales for public street and highway lighting, to public authorities, railroads and railways, and interdepartmental sales.

[2] Includes Bundled and Unbundled Consumers

Table 9.6 - Production, Operation, and Maintenance Expenses for Major U.S. Investor-Owned and Publicly Owned Utilities

(Million Dollars)

	Investor-Owned Utilities			Publicly Owned Utilities[1]		
	1990	1995	2000	1990	1995	2000
Production Expenses						
Power Generation	32,635	29,122	32,555	5,276	5,664	7,702
Purchased Power	20,341	29,981	61,969	10,542	11,988	16,481
Other Production Expenses	9,526	9,880	12,828	155	212	225
Total Production Expenses	62,502	68,983	107,352	15,973	17,863	24,398
Operation and Maintenance Expenses						
Transmission Expenses	1,130	1,425	2,699	604	788	982
Distribution Expenses	2,444	2,561	3,115	950	1,274	1,646
Customer Accounts Expenses	3,247	3,613	4,246	375	448	662
Customer Service and Information Expenses	1,181	1,922	1,839	75	120	233
Sales Expenses	212	348	403	29	29	82
Administrative and General Expenses	10,371	13,028	13,009	1,619	2,128	2,116
Total Electric Operation and Maintenance Expenses	18,585	22,897	25,311	3,653	4,787	5,721

Source: EIA, *Electric Power Annual 2001,* DOE/EIA-0348(01) (Washington, D.C., March 2003), Tables 11 and 13; EIA, *Financial Statistics of Major US Publicly Owned Electric Utilities 1994,* DOE/EIA-0437(94)/2 (Washington, D.C., December 1995), Table 8 and Table 17; EIA, *Financial Statistics of Major US Publicly Owned Electric Utilities 1999,* DOE/EIA-0437(99)/2 (Washington, D.C., November 2000), Table 10 & Table 21; EIA *Financial Statistics of Major US Publicly Owned Electric Utilities 2000,* DOE/EIA-0437(00)/2 (Washington, D.C., November 2001), Table 10 & Table 21.

Notes:

[1] Publicly Owned Utilities include generator and nongenerator electric utilities.

Table 9.6a - Operation and Maintenance Expenses for Major U.S. Investor-Owned Electric Utilities

(Million Dollars, unless otherwise indicated)

	1990	1995	2000
Utility Operating Expenses	142,471	165,321	210,324
Electric Utility	127,901	150,599	191,329
Operation	81,086	91,881	132,662
Production	62,501	68,983	107,352
Cost of Fuel	32,635	29,122	32,555
Purchased Power	20,341	29,981	61,969
Other	9,526	9,880	12,828
Transmission	1,130	1,425	2,699
Distribution	2,444	2,561	3,115
Customer Accounts	3,247	3,613	4,246
Customer Service	1,181	1,922	1,839
Sales	212	348	403
Administrative and General	10,371	13,028	13,009
Maintenance	11,779	11,767	12,185
Depreciation	14,889	19,885	22,761
Taxes and Other	20,146	27,065	23,721
Other Utility	14,571	14,722	18,995
Operation (Mills per Kilowatthour) [1]			
Nuclear	10.04	9.43	8.41
Fossil Steam	2.21	2.38	2.31
Hydroelectric & Pumped Storage	3.35	3.69	4.74
Gas Turbine and Small Scale [2]	8.76	3.57	4.57
Maintenance (Mills per Kilowatthour) [1]			
Nuclear	5.68	5.21	4.93
Fossil Steam	2.97	2.65	2.45
Hydroelectric & Pumped Storage	2.58	2.19	2.99
Gas Turbine and Small Scale [2]	12.23	4.28	3.50

Source: EIA, *Electric Power Annual 2001,* DOE/EIA-0348(01) (Washington, D.C., March 2003), Table 8.2.

Notes:

[1] Operation and maintenance expenses are averages, weighed by net generation.

[2] Includes gas turbine, internal combustion, photovoltaic, and wind plants.

Table 9.6b - Operation and Maintenance Expenses for Major U.S. Publicly Owned Generator and Nongenerator Electric Utilities

(Million Dollars, except employees)

	1990	1995	2000
Production Expenses			
Steam Power Generation	3,742	3,895	5,420
Nuclear Power Generation	1,133	1,277	1,347
Hydraulic Power Generation	205	261	332
Other Power Generation	196	231	603
Purchased Power	10,542	11,988	16,481
Other Production Expenses	155	212	225
Total Production Expenses	15,973	17,863	24,398
Operation and Maintenance Expenses			
Transmission Expenses	604	788	982
Distribution Expenses	950	1,274	1,646
Customer Accounts Expenses	375	448	662
Customer Service and Information Expenses	75	120	233
Sales Expenses	29	29	82
Administrative and General Expenses	1,619	2,128	2,116
Total Electric Operation and Maintenance Expenses	19,626	22,651	30,100
Fuel Expenses in Operation			
Steam Power Generation	2,395	2,163	4,150
Nuclear Power Generation	242	222	316
Other Power Generation	113	101	373
Total Electric Department Employees[1]	NA	73,172	71,353

Source: EIA, *Financial Statistics of Major US Publicly Owned Electric Utilities 1994*, DOE/EIA-0437(94)/2 (Washington, D.C., December 1995), Table 8 and Table 17; EIA, *Financial Statistics of Major US Publicly Owned Electric Utilities 1999*, DOE/EIA-0437(99)/2 (Washington, D.C., November 2000), Table 10 & Table 21; EIA, *Financial Statistics of Major US Publicly Owned Electric Utilities 2000,* DOE/EIA-0437(00)/2 (Washington, D.C., November 2001), Table 10 & Table 21.

Notes:

[1] Data reporting initiated in 1992. Number of employees were not submitted by some publicly owned electric utilities because the number of electric utility employees could not be separated from the other municipal employees or the electric utility outsourced much of the work.

Table 9.7 - Environmental Compliance Equipment Costs

	1990	1995	2000	2010	2020	2025
Average Flue Gas Desulfurization Costs at Utilities						
Average Operation & Maintenance Costs (mills/kWh)	1.35	1.16	0.96	NA	NA	NA
Average Installed Costs ($/kW)	118	126	124	NA	NA	NA

Source: EIA, *Electric Power Annual 2001*, DOE/EIA-0348(01) (March 2003), Table 5.3.

Notes:
Includes plants under the Clean Air Act that were monitored by the Environmental Protection Agency even if sold to an unregulated entity.
These data are for plants with a fossil-fueled steam-electric capacity of 100 megawatts or more.